

### Abstract of the Disclosure

A method and apparatus to estimate a motion using searched motion vectors, and an image encoding system adopting the method and apparatus are provided. The motion between lower level frame data is estimated to obtain search points with minimum Sum of Absolute Differences (SADs). The search points are used as a based motion vector. Searches are performed on both upper level frame data and upper level field data using the based motion vector and search points are obtained with minimum SADs. The search points obtained from the searches on the upper level frame data and upper level field data are used as frame and field motion vectors.